

**REMARKS**

The Examiner is thanked for the due consideration given the application.

Claims 1, 3-7 and 10-30 are pending in the application. The allowance of claims 11-14 is noted with appreciation. Independent claims 1, 7 and 15 have been amended to merely remove a limitation pertaining to a permeation limiting zone having a plate-formed partition wall with a plurality of openings formed from circles, ovals, polygonal holes or slits, and thus no new issues are raised.

No new matter is believed to be added to the application by this amendment.

Entry of this amendment under 37 CFR §1.116 is respectfully requested because it places the application in condition for allowance.

**Rejections Based On KNAPP et al.**

Claims 1-7, 10 and 20-27 have been rejected under 35 USC §103(a) as being anticipated by KNAPP et al. (U.S. Patent 6,235,471) in view of PRINCE et al. (WO 98/13131). Claims 15-19 have been rejected under 35 USC §103(a) as being unpatentable over KNAPP et al. in view of PRINCE et al., and further in view of SUNDBERG et al. (U.S. Patent 6,086,825).

These rejections are respectfully traversed.

The present invention pertains to a particle manipulation unit that is illustrated, by way of example, in Figure 1 of the application, which is reproduced below.

FIG. 1

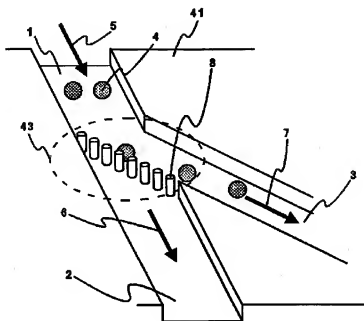


Figure 1 shows a channel 1 with a branching point 43 (permeation limiting zone) containing obstacles 8 spaced by regular gaps. As can be seen, the obstacles have a cylindrical shape. Claim 1 of the present invention recites: *"said permeation limiting zone has a plurality of obstacles arranged to be spaced from each other, the obstacles being selected from the group consisting of cylinders, pseudo-cylinders, cones, circular cones, elliptical cones, prisms, triangular prisms and quadrangular prisms."* Independent claims 7 and 15 include similar limitations.

KNAPP et al. pertain to closed-loop biochemical analyzers. The Official Action refers to column 42, lines 12-35 of KNAPP et al. Column 42, lines 32-35 of KNAPP et al. generally describes: *"Such junctions may include ports or channels, which can be clear, i.e., unobstructed, or can optionally include valves, filters, and the like, provided that fluid freely passes through the junction when desired."* No further details regarding the *"filters"* are provided.

One of ordinary skill would be motivated by the teachings of KNAPP et al. to turn to a conventional filter having an isotropic pore structure of a type that works by clogging and sedimentation. This type of filter would be unsuitable for the protein separation of the present invention.

The *"filters"* taught by KNAPP et al. do not disclose the asymmetric i.e., anisotropic, obstacles set forth in independent claims 1, 7 and 15 of the present invention.

The Official Action acknowledges that KNAPP et al. do not specify details regarding the filter. The Official Action refers to Figure 4 of PRINCE et al., which is reproduced below.

FIG.4

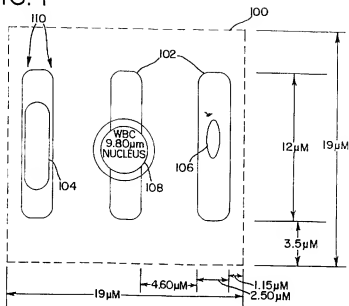


Figure 4 of PRINCE et al. shows oblong holes in a sheet of material. That is, page 15, lines 15-18 of PRINCE et al. states: "Figure 4 depicts a family of membranes 100 having pores 102 of generally rectangular or, due to the corner fillets 110, somewhat oval shaped, about 12 microns long and 2.5 microns wide."

However, PRINCE et al. do not disclose **obstacles** with an anisotropic shape, such as is set forth in independent claims 1, 7 and 15 of the present invention.

The teachings of SUNDBERG et al. fail to address the above-described deficiencies of KNAPP et al. and PRINCE et al.

One of ordinary skill and creativity would thus fail to produce claims 1, 7 and 15 of the present invention from a knowledge of the applied art references. A *prima facie* case of

unpatentability has thus not been made. Claims depending upon claim 1, 7 or 15 are patentable for at least the above reasons.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

**Conclusion**

The Examiner is thanked for considering the Information Disclosure Statement filed June 2, 2005 and for making an initialed PTO-1449 Form of record in the application.

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

The rejections are believed to have been overcome, obviated or rendered moot and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Robert E. Goozner/  
Robert E. Goozner, Reg. No. 42,593  
209 Madison Street, Suite 500  
Alexandria, VA 22314  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

REG/lrs